MULTIMEDIA UNIVERSITY

STUDENT ID NO

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# MULTIMEDIA UNIVERSITY

# FINAL EXAMINATION

**TRIMESTER 1, 2017 / 2018 SESSION**

## DOM5018 – OPERATIONS MANAGEMENT

(For Diploma Students Only)

21 OCTOBER 2017
2.30 pm – 4.30 pm
(2 Hours)

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**INSTRUCTIONS TO STUDENT**

1. This question paper consists of **NINE (9)** pages with **TWO (2)** sections.
2. Answer **ALL** questions.
3. For section A, shade your answers in the OMR sheet provided.
4. For section B, write your answers in the answer booklet provided.

**SECTION A: MULTIPLE CHOICE QUESTIONS (each question carries 1 mark). Answers for this section should be shaded on the OMR sheet provided.**

1. Which of the following will **NOT** be an operations activity of Malaysia Airlines Berhad?

   A. Flying schedules.
   B. Promote inflight services.
   C. Repair traffic lights.
   D. Aircraft maintenances.

2. Nestle Malaysia produces KitKat Chocolates on an assembly line, currently producing 1600 chocolates per shift. If the production is increased to 2000 chocolates, the labour productivity will increase by _____.

   A. 10%
   B. 20%
   C. 25%
   D. 40%

3. Which of the following is **NOT** in service sector?

   A. Ng Dental Clinic.
   B. Public Bank Berhad.
   C. Samsung Malaysia Sdn. Bhd.
   D. Creative Hair Studio and Academy.

4. _____ statements tell the purpose for an organisation's existence.

   A. Vision
   B. Mission
   C. Strategy
   D. Production

5. A firm can effectively use its operations function to yield competitive advantage through all of the following **EXCEPT** _____.

   A. speed of delivery
   B. customisation of the product
   C. constant innovation of new products
   D. setting equipment utilisation goals below the industry average

**Continued...**

6. _____ is the ability of an organisation to provide the maximum value as perceived by customer.

   A. Competing on cost
   B. Competing on response
   C. Competing on flexibility
   D. Competing in differentiation

7. Sony would like to design a new model of television that consume of solar power. _____ would be most appropriate for this new product planning.

   A. Short range forecast
   B. Long range forecast
   C. Medium range forecast
   D. Manufacturing forecast

8. _____ using a group process that allows experts to make forecast.

   A. Delphi method
   B. Consumer market survey
   C. Sales force composite
   D. Jury of executive opinion

9. In the _____ stage of product life cycle, Operations Managers will be concerned on adding capacity or enhancing existing capacity to accommodate the increase in product demand.

   A. growth
   B. decline
   C. maturity
   D. introduction

10. Which of the following is **TRUE** regarding Computer-Aided Design?

    A. It is an old technology.
    B. It results in longer development cycles for virtually all products.
    C. It is too expensive to use in most manufacturing and design settings.
    D. It is the use of computers to interactively design products and prepare engineering documentation.

**Continued...**

11. A restaurant's kitchen had displayed a wall poster that describes the procedures to prepare different types of sandwiches. This is an example of _____.

A. route sheet
B. assembly chart
C. assembly drawing
D. Engineering Change Notice (ECN)

12. Which of the following service design techniques would **NOT** be appropriate for a restaurant?

A. Customisation.
B. Modularising the product.
C. Reduce customer interactions.
D. Impose extra charges on an automation process.

13. Pareto charts are used to _____.

A. show materials flow
B. outline production schedules
C. organise errors, problems, or defects
D. identify inspection points in a process

14. Which of the following is **NOT** the implication of quality towards organisation?

A. Product liability.
B. Process analysis.
C. Global implications.
D. Company reputation.

15. An assembly line is an example of _____.

A. line process
B. specialised process
C. product-focused process
D. process-focused process

16. Zalora.com enables customers to examine, compare and evaluate the products at their own pace through online shopping. This is an example of _____.

A. focus
B. separation
C. self-service
D. postponement

**Continued...**

17. Industrial location analysis typically attempt to _____.

A. minimise costs
B. minimise sales
C. focus more on human resources
D. ignore exchange rates and currency risks

18. Which of these factors would be considered when making a location decision at the site level?

A. Cost and availability of utilities.
B. Cultural and economic issues.
C. Zoning regulations.
D. Proximity to raw materials and customers.

19. One of the major advantages of process-oriented layouts is _____.

A. high volume of production
B. large work-in process inventories
C. lower labour costs
D. flexibility in equipment and labour assignment

20. Which type of layout is specifically designed to encourage employees to interact?

A. Job shop.
B. Open office.
C. Warehouse.
D. Retail shop.

21. Below are the constraints on human resource strategy **EXCEPT** _____.

A. Utilities strategy
B. Product strategy
C. Location strategy
D. Individual differences

22. _____ specifies the tasks that constitute a job for an individual or a group.

A. Job design
B. Labour planning
C. Work schedules
D. Job enlargement

**Continued...**

23. A fried chicken fast-food chain that acquired feed mills and poultry farms has performed _____.

A. job expansion
B. forward integration
C. backward integration
D. horizontal integration

24. Sony manufacturing has produced 200 units of 60 inches limited edition television for FIFA World Cup Campaign. They have to ship all of the televisions to several countries on time. The best shipping systems that Sony should use is _____.

A. trucking
B. railroads
C. airfreight
D. waterways

25. Cycle counting _____.

A. provides a measure of inventory turnover
B. provides a measure of inventory accuracy
C. is a process by which inventory records are verified once a year
D. assumes that all inventory records must be verified with the same frequency

26. There are two types of inventory models, namely _____ demand and _____ demand.

A. quantity; quality
B. individual; group
C. quality; finished goods
D. independent; dependent

27. _____ supply the customer with exactly what the customer wants when the customer wants it, without waste, through continuous improvement.

A. Just in time
B. Lean operations
C. Operations management
D. Supply chain management

**Continued...**

28. A rate at which units move through a production process is called a _____.

A. throughput
B. queuing time
C. pull and push time
D. manufacturing cycle

29. _____ refers to the routine inspection and servising to keep facilities in good condition.

A. Preventive maintenance
B. Inspection management
C. Maintenance management
D. Breakdown maintenance

30. The probability that a product will function properly for a specified time under stated conditions is _____.

A. reliability
B. durability
C. functionality
D. fitness for use

**[TOTAL 30 MARKS]**

**Continued...**

**SECTION B: STRUCTURED QUESTIONS.**
**Answer ALL questions.**

## QUESTION 1

a) Define '*quality*'. (2 marks)

b) Identify the **THREE (3)** implications of quality towards organisation. (3 marks)

c) List the **SEVEN (7)** tools of Total Quality Management (TQM). (7 marks)

d) State any **THREE (3)** when and where to do inspection. (3 marks)

## QUESTION 2

a) There are ten (10) strategic Operations Management decisions which an organisation must practice to ensure they meet the customer's satisfaction. List any **SEVEN (7)** of these decisions. (7 marks)

b) Bridgestone Malaysia produces a Turanza tires model on an assembly line, currently producing 1000 tires per day with the following resources provided in ***Exhibit 1***:

| | |
|---|---|
| Labour: | 600 hours per day @ RM4,000 per day |
| Raw Material: | RM10,000 per day |
| Energy: | RM3,250 per day |
| Capital costs: | RM7,000 per day |

***Exhibit 1***

i) Compute the labour productivity. (2 marks)

ii) Compute the multifactor productivity. (3 marks)

iii) Compute the new labour productivity which increased by 20% from the current labour productivity. (3 marks)

**Continued...**

## QUESTION 3

Operations Managers have been pursued "housekeeping" for neat, orderly, and efficient workplace and as well as a means of reducing waste.
This is known as the 5Ss.

a) List and explain the **FIVE (5)** S for continuous improvement in an organisation. (10 marks)

b) Asus (M) Sdn Bhd produces short runs of notebooks that are transported to distributors. You have been asked by the Operations Manager to reduce inventory by introducing a Kanban system. The following data have been provided in ***Exhibit 2***:

| | |
|---|---|
| Daily demand | 652 units |
| Production lead time | 2 days |
| Safety stock | ¼ day |
| Kanban size | 163 units |

***Exhibit 2***

i) Calculate demand during lead time. (2 marks)

ii) Calculate the safety stock. (2 marks)

iii) How many kanbans are needed? (2 marks)

iv) Explain any **TWO (2)** advantages of Kanban. (4 marks)

**Continued...**

## QUESTION 4

***Inventory Management Technique in Pharmaceutical Industry***

"Pharmaceutical is one of the most sensitive and major industry that deals with human and animal life. Purity is highly deserved in this industry and there is no option of second chance. Quality, security, identity are the most important to maintain. Therefore, the inventory management of the industry is a challenge job because they deal with the largest amount of medicine stocks. For many pharma companies, inventory represents the largest single investment of their total assets. Inventory itself is expensive. To hold inventory, companies need to pay for storage, security, picking and handling, insurance and so on. Basically for pharmaceutical company, they need to handle 500-600 types of products that include huge amount of raw material movement, packaging and secondary packaging of the finished products. They must know how much to order and when to order the materials in. Hence, the inventory planning and scheduling in the pharmaceutical companies is a critical activities and need to perform carefully."

***Source:http://www.academia.edu/7422739/Inventory_management_technique_in_pharmaceutical_industry***

a) Explain any **TWO (2)** functions of Inventory Management. (4 marks)

b) Based on the article above, pharma companies deal with a huge number of medicine stocks. This can be translated into ABC analysis.

   (i) Define '*ABC analysis*'. (2 marks)

   (ii) State the **THREE (3)** classes of ABC analysis that can be implemented by the pharma companies. (6 marks)

c) List and explain the **FOUR (4)** types of inventory that can be applied by pharma companies? (8 marks)

**[TOTAL 70 MARKS]**

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